Title: *SALMONELLA* SEROTYPES CIRCULATING IN BRAZIL FROM 2012 TO 2014

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Abstract:

Salmonella has been recognized as an important pathogen and is a growing public health concern in both the developed and developing worlds. As a zoonotic microorganism, accounting worldwide for high rates of morbidity and loss of economic order ~~and~~ the main reservoir of Salmonella is the intestinal tract of a wide range of domestic and wild animals, which may result in contamination of a variety of animal and vegetable foods. There are recognized about 2610 serotypes capable of infecting humans and other animals and widely distributed in the environment, and the important antigenic characterization tool in epidemiological surveillance. In the present study 10,938 strains of *Salmonella* spp. isolated from animal (2336), environmental (4516) and feed (4086) sources, received by LABENT/IOC/FIOCRUZ from January / 2012 and December / 2014, were serotyped following the White– Kauffman–Le Minor scheme (Guibourdenche et al., 2010) with antisera poly and monovalent, somatic and flagellar. Were identified an media of 59 different serovars in the three years of the study. Overall, among the most prevalent sorovars, were Infantis (361- 8.9%), Mbandaka (320- 7.9%), Typhimurium (313- 7.7%), Tenesse (249- 6.1%), Senftenberg (238- 5.8%), Montevideo (228- 5.6%) and Anatum (202- 5%) in 2012; Mbandaka (290- 8.2%), Anatum (244- 6.9%), Typhimurium (185- 5.2%), Infantis (173- 4.9%), Agona (128- 3.6%), Heidelberg (96- 2.7%) and Schwarzengrund (87- 2.5%) in 2013; and Senftenberg (330- 9.9%), Montevideo (251- 7.5%), Heidelberg (245- 7.3%), Anatum (229- 6.9%), Schwarzengrund (209- 6.3%), Mbandaka (158- 4.7%) and Infantis (108- 3.2%) in 2014. The animal source showed among the most prevalent serovars, Infantis (10.3%), Typhimurium (9.42%) and Schwarzengrund (6.2%); in the environment, Senftenberg (9.12%); Typhimurium (8.41%) and, Anatum (7.35%); feed and feedstuff, *Salmonella* ser. Montevideo (12.6%); Mbandaka (6.4%); and Senftenberg (9%). Particularly S. Enteritidis was isolated from animal source in the three years of the study (35, 30 and 21, respectivly). The results showed interrelations between serovars in different sources of the food chain demonstrating the importance of monitoring this microorganism continuously as support for the strengthening of integrated prevention and control of salmonellosis by the sanitary and epidemiological surveillance authorities.

Keywords**:** antigenic characterization, food chain, *Salmonella* spp.